

Applicant(s): Daniel MEISEL et al.
Atty. Docket: 31775-210910

REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of October 3, 2007.

Reconsideration of the Application is requested.

The Office Action

Claims 1-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nassenstein (U.S. Patent No. 3,635,570.)

Claims 1-15 are in the application.

Claims Distinguish over Cited Prior Art

Claims 1-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nassenstein (U.S. Patent No. 3,635,570).

Claim 1 calls for among other elements: exposing a volume of photosensitive material with at least two light beams, each having an angle of incidence greater than a critical angle, which beams are superposed inside the photosensitive material.

Nassenstein describes simultaneous exposure of a light-sensitive material to an imagewise modulated object beam 2 and one reference beam 1 through a glass prism 6. (Col. 2, lines 7-11.) The reference beam enters at such an angle that a total reflection takes place. (Col. 2, lines 11-12.) The inhomogeneous surface beam is formed in the region 8 of the layer at the interface between the contact liquid 5 and the light-sensitive layer 3 and enters the photographic layer to a depth of the order of the wavelength. (Col. 2, lines 12-15.) The hologram is formed in this thin layer (Col. 2, lines 16-17.) Therefore, since the reference beam 1 only enters the photographic layer material to a depth of the order of the wavelength, the beams 1, 2 are not truly superposed in the photographic layer. At most, the beams 1, 2 interact with one another at the interface of the liquid layer 5 and the light-sensitive layer 3. The photographic layer is exposed only with one beam (beam 2), while the other beam (beam 1) is used to only form a surface wave on the top of the photographic layer.

Applicant(s): Daniel MEISEL et al.
Atty. Docket: 31775-210910

Additionally, only one beam (beam 1) has an angle of incidence greater than the critical angle, thus resulting in a total internal reflection. To the contrary, as claimed in claim 1, at least two beams leave an angle of incidence greater than the critical angle and are superposed in the photosensitive material. That is, despite the fact the two beams have angles of incidence greater than the critical angle, a total internal reflection of either beam is avoided.

For at least the reason that Nassenstein does not disclose, teach or otherwise suggest "exposing a volume of photosensitive material with at least two light beams, each having an angle of incidence greater than a critical angle, which beams are superposed inside the photosensitive material," it is respectfully submitted that **claim 1 and dependent claims 2-15** distinguish patentably and unobviously over Nassenstein.

Applicant(s): Daniel MEISEL et al.
Atty. Docket: 31775-210910

CONCLUSION

For at least the reasons detailed above, it is submitted that all claims remaining in the application (**Claims 1-15**) are in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

No additional fee is believed to be due for this Amendment. However, the undersigned attorney of record hereby authorizes charging of any necessary fees, other than the issue fee, to the Deposit Account No. 22-0261.

If the Examiner finds a personal contact advantageous to the disposition of this case, the Examiner is invited to call the undersigned at the telephone number listed below.

Dated: 12/18/07

Respectfully submitted,

By Robert Kinberg
Robert Kinberg

Registration No.: 26,924
Marina V. Zalevsky
Registration No.: 53,825
VENABLE LLP
P.O. Box 34385
Washington, DC 20043-9998
(202) 344-4000
(202) 344-8300 (Fax)
Attorney/Agent For Applicant

DC2DOCS/914689